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09/957,496	09/20/2001	Susumu Senshu	450100-03493	3144

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EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/957,496

Applicant(s)

SENSHU, SUSUMU

Examiner

Peter Vincent Agustin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/23/03 and 8/16/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

2. Figures 1 & 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors, e.g.,

Page 12, lines 1-2: "n = 6" should be --n = 3--.

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

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5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

On claim 7, the recitation that "identical data is disposed in each of said n blocks" has not been clearly described in the applicant's specification.

***Claim Objections***

6. Claims 1-7 are objected to because of the following informalities:

Claim 1, line 7: "said block" should be --each of said blocks--.

Claims 2-7 are dependent upon claim 1.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-10 & 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Gotoh et al. (US 6,052,465).

In regard to claim 1, Gotoh et al. disclose a disk-like recording medium (see figure 1, element 819d) for concentrically recording auxiliary information ("BARCODE") of a disk in a second area (non-data area) other than a first area for recording contents data of said disk by a predetermined code comprising: n blocks each obtained by dividing said second area into n equal parts in a circumferential direction (see figure 5(d): second area is divided into address blocks n,

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$n+1$ , ... etc.); and  $m$  frames each obtained by dividing said block into  $m$  equal parts in the circumferential direction (figure 5(e): address block  $n$  is divided into  $m$  frames); wherein said auxiliary information is arranged in said frames in such a manner as to be at equal intervals in the circumferential direction, and a synchronization signal is disposed in each of said frames ("FRAME SYNCHRONIZING SIGNAL" of figure 5(e)).

In regard to claim 2, Gotoh et al. disclose that in one of said frames,  $k$  channel bits are arranged at intervals obtained by dividing said frame into  $k$  equal parts (see figure 5(e): note that "REPRODUCED CLOCK" = channel bit clock, see for example Yumiba et al. (US 6,661,768), column 14, lines 41-46).

In regard to claim 3, Gotoh et al. disclose that said auxiliary information is modulated by a modulation method capable of word synchronization or bit synchronization (see figure 23, elements 910 & 913; and column 19, lines 44-48).

In regard to claim 4, Gotoh et al. disclose that said modulation method is a phase encoding method or a 4-1 modulation method (column 19, line 45).

In regard to claim 5, Gotoh et al. disclose that when a value of said  $m$  is two or more, the number of kinds of said synchronization signals is two or more and  $m$  or less (see figure 5(e) and "SYNC CODE" column of figure 34A).

In regard to claim 6, Gotoh et al. disclose that an error correction code is added to said auxiliary information (see figure 23, element 907 and figure 33A).

In regard to claim 7, Gotoh et al. disclose that identical data is disposed in each of said  $n$  blocks (figure 5(d) shows identical data, such as address data, disposed in blocks  $n$  and  $n+1$ ).

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In regard to claim 8, Gotoh et al. disclose a disk recording apparatus (figure 23) for recording auxiliary information of a disk (800) concentrically over a plurality of tracks in a second area (non-data area) other than a first area for recording contents data of said disk by a predetermined code comprising: rotating means (915) for rotating said disk; generating means (913) for generating a channel clock corresponding to an interval obtained by dividing one frame into  $k$  equal parts where  $n$  blocks each having a length obtained by dividing said second area into  $n$  equal parts in a circumferential direction are generated and  $m$  frames each having a length obtained by dividing one of the blocks into  $m$  equal parts in the circumferential direction are generated (see claim 1 rejection above), the channel clock being required for recording said auxiliary information; control means (inherent: see note) for controlling rotation of said disk so that one rotation of said disk is in synchronism with a cycle of  $n \times m \times k$  channel clocks (note: referring to figures 5(d) and 5(e), since the claimed “ $n$ ” is the total number of address blocks in the auxiliary information area, the claimed “ $n \times m \times k$  channel clocks” is simply the total number of channel bit clocks in the entire auxiliary information area, which encompasses one full rotation; therefore, one rotation of the disk is in synchronism with a cycle of  $n \times m \times k$  channel clocks, as claimed); modulating means (910) for modulating said auxiliary information on the basis of said channel clock generated by said generating means; and recording means (911, 929, 912 & 914) for recording said auxiliary information modulated by said modulating means on said disk.

In regard to claim 9, this claim has limitations that are similar to or inherent from those of claim 8, thus, it is rejected using the same rationale as applied to claim 8 above.

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In regard to claim 10, this claim has limitations that are similar to or inherent from those of claim 8, thus, it is rejected using the same rationale as applied to claim 8 above. Furthermore, Gotoh et al. discloses a rotating means for rotating said disk at a constant angular velocity (column 25, lines 4-10); and demodulating means for sampling a signal outputted by said playback means on the basis of said clock generated by said generating means and demodulating said channel bits, or words while correcting said channel bits, or the words (see figure 15, elements 591 & 36).

In regard to claim 13, this claim has limitations that are similar to or inherent from those of claim 10, thus, it is rejected using the same rationale as applied to claim 10 above.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 11 & 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gotoh et al. in view of Horiguchi (US 5,380,996).

For a description of Gotoh et al., see the rejection above. Furthermore, in regard to claim 11, Gotoh et al. disclose correcting means for making error correction on the basis of an error correction code included in said auxiliary information (figure 15, elements 591, 592 & 36; column 15, lines 7-10). However, in regard to claim 11, Gotoh et al. do not explicitly disclose determining correct auxiliary information by majority rule; and in regard to claim 12, Gotoh et

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al. do not explicitly disclose that said correcting means makes error correction on auxiliary information obtained by collecting portions determined by majority rule.

Horiguchi discloses using majority rule for error correction, which necessarily involves the claimed "collecting portions determined by majority rule" of claim 12 (column 12, lines 52-58). It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to have used the majority rule of Horiguchi for the determining the correct auxiliary information of Gotoh et al., the motivation being to provide high error detection/correction, thereby ensuring accurate reproduction of the auxiliary information.

#### ***Citation of Relevant Prior Art***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Furukawa et al. (US 6,009,057) disclose a disc drive equipped with an identification indication reader, i.e., a bar code reader, which identification indication is provided in a bar code area of an optical disc.

Shim (US 2002/0085466) discloses a disc having a unique code for identifying its type, which code is written to a burst cutting area region of an optical disc.

Tanaka et al. (US 6,618,335) show in figure 13 how a bar code is encoded using phase encode modulation.

#### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is 703-305-8980. The examiner can normally be reached on Monday-Friday 9:30-5:30 PM.

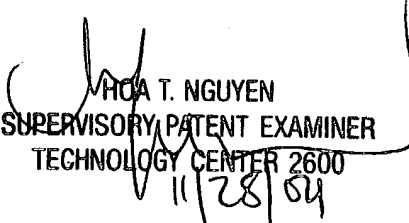


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on 703-305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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11/28/04